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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF : Leonard, et al.
FOR : METHOD AND DEVICE FOR PRODUCING
AQUEOUS IODINE AND OTHER HALOGEN
SOLUTIONS
SERIAL NO. : 10/059,577
FILED : January 29, 2002
EXAMINER : Menon, Krishnan S.
ART UNIT : 1723
CONFIRMATION NO. : 7926
LAST OFFICE ACTION : September 25, 2003
ATTORNEY DOCKET NO . : EPEZ 200012

RULE 37 C.F.R. §1.193(b)(1) APPELLANT'S REPLY BRIEF

Mail Stop Appeal Brief – Patents
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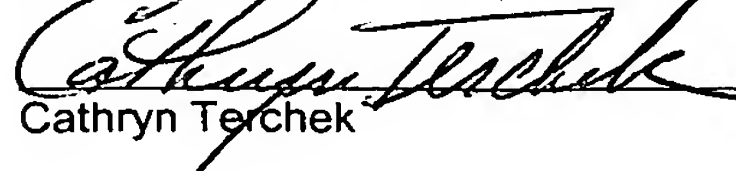
Dear Sir:

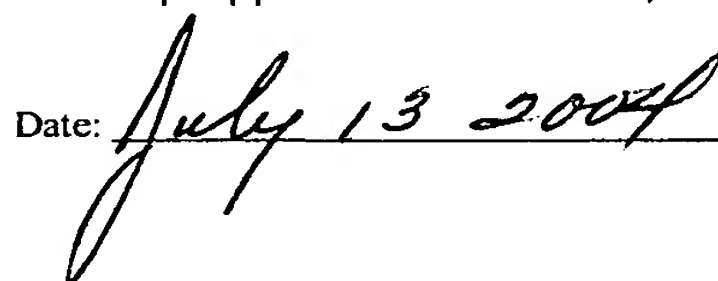
This Reply Brief is in response to the Examiner's Answer mailed on June 16, 2003.

Appellant files herewith a Reply Brief in connection with the above-identified application wherein claims 1-9, 19 and 20 were finally rejected in the Office Action of September 25, 2003. What follows is Appellant's Reply Brief in accordance with 37 C.F.R. §1.193(b)(1).

CERTIFICATE OF FIRST CLASS MAILING

I hereby certify that this Rule 37 C.F.R. §1.192 Appellant's Brief is being deposited with the United States Postal Service as First Class Mail service and is addressed to Mail Stop Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.


Cathryn Terchek

Date: 
July 13 2004

REMARKS

Appellant has reviewed the Examiner's Answer mailed May 19, 2004 in the above-captioned appeal. Appellant presents the following comments in response to remarks and arguments presented therein.

In the interest of brevity, Appellant will not attempt to restate the arguments present in the Appeal Brief, but to merely address Examiner's response to these arguments, and the inherent faults in the Examiner's position.

A. REBUTTAL OF EXAMINER'S ARGUMENTS WITH REGARD TO PORE SIZE

First, Appellant would like to thank the Examiner for acknowledging that O'Dowd does indeed disclose a non-porous barrier for use in his invention. This is the first time that the Examiner has acknowledged that fact, even though the Appellant first brought it to the Examiner's attention over a year ago in an amendment submitted on July 10, 2003.

Incredibly, however, instead of allowing the application, the Examiner continues to reject the claims and attempts to argue that the non-porous materials of O'Dowd are equivalent to the porous materials as claimed in the present application. In attempt to support his argument, and notwithstanding the antithetical nature of the two words (i.e. "non-porous" and "porous"), the Examiner points to the Appellant's indication that the pore size must be less than 5 microns (without reciting a lower limit). However, this passage must be read in light of the phrase immediately preceding it to give the limitation its proper context. Thus, the full sentence reads: "In order to permit the transfer of iodine vapor and to restrict passage of solid iodine, the pore size should be no greater than 5 microns". Thus, the upper limit of 5 microns is necessary to prevent the passage of iodine vapor. Although no lower limit is recited here, that does not mean that the pore size can range from 0-5 microns. Rather, a lower limit is what one skilled in the art would recognize as being the smallest size through which iodine vapor can freely pass. One must read ranges in a specification in light of what one skilled in the art would recognize as workable.

In this respect, the Examiner states that "since the claims are not limited by any specific metes and bounds for the definition of 'porous', Examiner has given it the broadest possible interpretation in light of the specification, and found

that the non-porous membrane taught by the O'Dowd reference falls within the Appellant's definition of 'porous', because...its pore size is less than 5 microns, and porosity (chosen at will) is zero or close to zero." As detailed above, the fact that a lower limit to size of the pores in the present invention is not given, does not mean that a pore size of zero or close to zero is encompassed by the claims. Rather, open ended claims are limited by what a person skilled in the art would understand to be workable. *Ralston Purina Co. v. Far MarCo. Inc.*, 227 USPQ 177 (Fed. Cir. 1985). Here, one skilled in the art would recognize that a lower limit to the pore size in the present invention is the smallest size through which iodine vapor can freely pass, as this is the advantage of the present invention as discussed throughout the present application. In this respect, the specification recites that "In practice, the pore size of suitable membranes needs to be chosen to be compatible with the defined requirements of use." (page 10, lines 5-6). This pore size is clearly greater than that possessed by the (admittedly) non-porous membranes of O'Dowd. That iodine passes through the pores at much greater rates than it diffuses through the non-porous membranes is what distinguishes the present invention from O'Dowd, as described in the background of the present application (see page 5).

In addition, the Examiner blatantly misstates that that the present application recites that the "porosity can be chosen at will." No such recitation is made. Rather, the passage cited by the Examiner correctly reads that the "**pore density** (pores per unit area) can be chosen at will." Pore density is, of course, a completely different aspect than pore size. Appellant is at a loss as to how this crucial misstatement was made by the Examiner and hope that it was merely a careless misuse of wording.

As an aside, the Examiner states that "the issue the Examiner is addressing is not whether 'permeable' could be equated to 'porous', but what constitutes 'porous' by the Appellant's definition. Appellant is somewhat puzzled by this since it was the Examiner that first used "permeable" terminology when he stated that "O'Dowd teaches and claims a barrier that permeates iodine vapor in abstract" (see OA, September 9, 2003, page 6) in response to Appellant's assertion that O'Dowd does not teach a porous membrane. Based on this, Appellant is of the opinion that they were justified in their belief that the Examiner was attempting to

equate "porous" with "permeable", especially in light of the Examiner's subsequent arguments, which are difficult to reconcile with any other interpretation.

B. REBUTTAL OF EXAMINER'S ARGUMENTS WITH REGARD TO THE MECHANISM OF IODINE TRANSPORT

The Examiner states that Appellant's argument that the iodine is not transported across the O'Dowd membrane in the vapor phase through pores in the membrane, but by dissolution is not commensurate with the claims. Appellant disagrees. Claim 1 recites permeating iodine vapor across the porous membrane. As is well understood, claims must be read in light of the specification. *Comark Communications, Inc. v. Harris Corp.*, 48 USPQ2d 1001 (Fed. Cir. 1998). Here, in a passage quoted above, the specification recites that "[I]n order to permit the transfer of iodine vapor...the pore size should be..." (page 10, lines 5-8). In addition, the specification clearly distinguishes the use of porous membrane in the present invention as compared to the non-porous membrane of O'Dowd (see background, etc.), the porous membrane allowing for greater transfer rates. These increased rates are due to the iodine vapor passing through the pores in the membrane, rather than having to diffuse through the membrane, as in O'Dowd. Thus, when read in light of the specification, the present claims clearly require that the iodine vapor pass through the pores in the porous membrane. Because O'Dowd neither teaches nor suggests such a mechanism, it fails to render the present claims unpatentable.

C. REBUTTAL OF EXAMINER'S ARGUMENTS WITH REGARD TO THE APPROPRIATENESS OF COMBINING O'DOWD AND KOCH

Applicants acknowledge that the two rejections based on a combination of O'Dowd and Koch are separate. The board will appreciate, however, that if there is no motivation to combine the two references, then ANY proposed combination of the two will be improper and would result in an improper rejection, regardless of the basis of such a combination. Thus, the two rejections can be considered together for purposes of determining whether the combination of the two references is appropriate.

O'Dowd relates to a method of providing thermodynamically free iodine. Koch, on the other hand, relates simply to an iodine impregnated filter for blocking the passage of bacteria in a feed liquid. Koch is not concerned with the

production of iodine, but simply with the use of iodine for trapping and destroying bacteria.

In support of his argument that the references relate to the same subject matter, the Examiner states "[B]oth references have iodine for the purpose of disinfecting, both release iodine into fluids, and both have iodine stored enclosed in a membrane." The Examiner's statements here are so overly broad as to border on being disingenuous. What exactly does the Examiner mean when he states that both have iodine for the purpose of disinfecting? O'Dowd has nothing of the kind. O'Dowd merely relates to a method of producing thermodynamically free iodine, which may then be used for any purpose for which iodine is commonly used (of course including disinfecting). Koch uses an iodine impregnated filter for disinfecting, it has nothing to do with the production of thermodynamically free iodine.

Further, the Examiner's statement that "both [references] release iodine into fluids" so incredibly broad as to render the statement almost meaningless. Even so, it is not accurate. Koch does not release iodine into a fluid. Rather, the iodophore is retained in the filter. Fluids passing through the filter are cleansed of bacteria that come into contact with the medication. Finally, the Examiner's statement that "both have iodine store enclosed in a membrane" is also incorrect. O'Dowd passes iodine through a membrane by diffusion. Thus, the iodine is not stored in the membrane, but actually diffuses therethrough. In contrast, Koch retains the iodine in the filter. As detailed in column 2, lines 37-41, Koch discloses that iodine may be impregnated into the macrofilter layer. Thus, the iodine is held static in the filter layer and is not transferred or permeated through the filter as disclosed in the present claims. Despite the Examiner's position, these references are NOT analogous.

In addition, and despite the Examiner's protest to the contrary, there is no motivation to combine the two references. The Examiner states that the "Koch reference teaches the different membranes and gives excellent motivation for combining with O'Dowd...such as selection of the membrane material or structure based on application, strength and safety." This is complete conjecture on the Examiner's part and is contradicted by the plain teachings of the references. The membranes of O'Dowd and the filter of Koch are drawn to different purposes. What

is advantageous for a filter according to Koch (e.g. high throughput, excellent bacteria retaining and destroying capabilities) is not advantageous or even relevant to a membrane for use in O'Dowd. There is no indication that "strength" or "safety" are even concerns in the practice of O'Dowd or that, even assuming they were, that the filter materials of Koch would provide such properties.

The Examiner goes on to state that "the deficiency of the Koch reference is that it does not teach a vessel that contains the receiving medium and the 'thermodynamically free' iodine, which are taught by O'Dowd, and the motivation is give by O'Dowd, which is 'for releasing the more effective thermodynamically free iodine into a receiving medium for applications as taught by O'Dowd.'" However, in Koch, there is no receiving medium because the iodine stays in the filter, it is not passed through with the fluid that is being filtered. Thus, there is no motivation to combine Koch with a reference that teaches releasing the iodine into a receiving medium. Koch works specifically because the iodine (or other medication) stays present in the filter. If the iodine passed into a receiving medium, the effectiveness of the filter would deteriorate. Thus, there is no motivation to combine the two references.

CONCLUSION


In view of the above, Appellant respectfully submits that claims 1-15, 26, 27, 30, and 31 are not anticipated or rendered obvious by the cited art.

Accordingly, it is respectfully requested that the Examiner's rejections be reversed.

Respectfully submitted,

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MINNICH & McKEE, LLP

Dated: July 13, 2004



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